

# PATENT ABSTRACTS OF JAPAN

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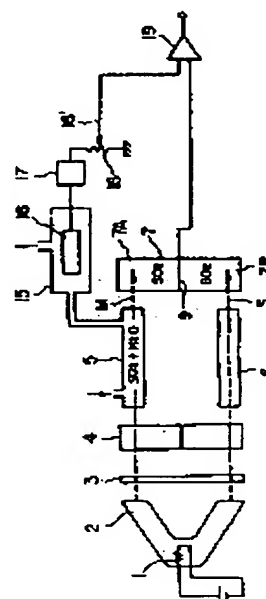
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## (54) METHOD FOR COMPENSATING INTERFERENCE IN NON-DISPERSIVE TYPE INFRARED ANALYSIS

### (57)Abstract:

**PURPOSE:** To compensate interference owing to a coexisting gas by subtracting the output of a sensor which responds to the concn. of the interfering gaseous component in a sample gas from the output of the concn. of the component in the gas to be measured in the sample gas and the concn. of the component in the coexisting gas which coexists in the sample gas.

**CONSTITUTION:** The measuring luminous flux M from a luminous flux distributor 2 and a reference luminous flux S are intermitted alternately by a chopper 3 and are made incident via an interference cell 4 to a measuring cell 5 and a reference cell 6. There is no IR absorption in the cell 6 and the flux S is made incident to the chamber 7B of a detector 7. The flux M transmitted through the cell 5 absorbs a part of IR rays by a sample gas SO<sub>2</sub> and H<sub>2</sub>O and is made incident to the chamber 7A of the detector 7. The output from the detector 7 is the sum of the outputs for the gas SO<sub>2</sub> to be measured and coexisting gas H<sub>2</sub>O in the sample gas and since the output from a DA converter 18 is the output for the coexisting gas H<sub>2</sub>O, the differential output from a differential amplifier 19 is only the gas to be measured SO<sub>2</sub> and the interference by the coexisting gas is compensated.



## LEGAL STATUS

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# DERWENT PUBLICATIONS LTD.

**SIEI ★ S03 83-754335/36 ★ EP -87-077-A**  
**Optically analysing gas mixt. by infrared radiation - with**  
**allowance for changes in source intensity and receiver sensitivity**  
**SIEMENS AG 23.02.82-DE-206427**

**J04 (51.08.83) G01n-21/31**

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For optical analysis of the  $n$  components in a flowing gas mixt. the mixt. travels in a conduit (1) with an infra-red radiation source (3) outside a window in one side and at the other side a photoelectric receiver (6) with  $n$  measurement channels to measure total extinction for effective wave lengths in the absorption bands of the components.

A calculator (9) determines the specific extinction and hence the amt. of each component, using a linear equation system of  $n$  Lambert-Beer determinations. The measurement channels have an extra wavelength channel so that allowance can be made for changes in source intensity and receiver sensitivity for the component-related output signals.

Suitable e.g. for measuring CO, SO<sub>2</sub> and H<sub>2</sub>O vapour in gas. No comparison radiation operation is necessary. (8pp Dwg.No.1/1)

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